

## INTERNATIONAL SEARCH REPORT

PCT/18 03/06248

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04B1/707 H04J3/06 H04L7/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04B H04J H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 00 64113 A (BAHRENBURG STEFAN ;BAIER PAUL WALTER (DE); MAYER JUERGEN (DE); EMM) 26 October 2000 (2000-10-26) abstract; claim 1; figures 1,2 page 1, line 3 -page 3, line 14 --- -/--	1-18



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

2 March 2004

Date of mailing of the international search report

17/03/2004

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>MING LEI, YUESHAN XU, PING ZHANG:  "Channel estimation based on midamble in ultra-TDD systems"  INTERNATIONAL CONFERENCE ON TELECOMMUNICATIONS, ICT'2002,  vol. 2, 23 June 2002 (2002-06-23), pages 434-438, XP008028023  Beijing, China  figures 1-3  page 1, left-hand column, line 1  -right-hand column, line 3  page 1, right-hand column, paragraph 3  page 2, right-hand column, paragraph 4</p>	1-18
A	<p>GRIPARIS, KOULAKIOTIS, AGHVAMI: "Channel estimation and tracking techniques for DS-CDMA systems"  INTERNATIONAL CONFERENCE ON TELECOMMUNICATIONS, ICT'98,  vol. 3, 21 June 1998 (1998-06-21), pages 108-113, XP008028022  Chalkidiki, Greece  page 1, left-hand column, line 1  -right-hand column, line 20  page 4, right-hand column, line 7 - line 16</p>	1-18
A	<p>US 2002/172187 A1 (SHALVI OFIR ET AL)  21 November 2002 (2002-11-21)  abstract; figure 1  paragraphs  '0006!, '0007!, '0011!, '0018!, '0019!</p>	1-18
A	<p>GB 2 371 725 A (UBINETICS LTD)  31 July 2002 (2002-07-31)  abstract; claims 1-8; figures 2,3  page 2, line 15 - line 27  page 3, line 23 -page 4, line 2  page 4, line 18 -page 5, line 2  page 5, line 12 - line 24  page 6, line 5 - line 32</p>	1-18
A	<p>WO 99 60759 A (AGHVAMI ABDOL HAMID ;KING S COLLEGE LONDON (GB); WU JIANJUN (GB))  25 November 1999 (1999-11-25)  abstract; claims 1-8; figures 1,2  page 3, line 10 - line 18  page 1, line 32 -page 2, line 22</p>	1-18
A	<p>US 5 761 211 A (SHIINO HARUHIRO ET AL)  2 June 1998 (1998-06-02)  abstract; figures 1,3  column 1, line 29 - line 51  column 2, line 41 -column 3, line 6</p>	1-18